Outfall 002A – TCE Exceedance in January 2019 and Plan of Action

The TCE concentration in the sample from outfall 002A (groundwater infiltration) was 18 ppb this month, compared to a permit limit of 5 ppb.

We believe this exceedance was due to the following:

- Full capture of dry weather flow was not being achieved at the time of sample collection at a recovery flow rate of 49.6 gallons per minute (gpm), most likely due to the high groundwater table infiltrating into the storm sewer system.

Note: The overflow switch was temporarily removed in early January to facilitate the replacement of CB-88 and grit cleanout in CB-87R. Therefore, it was not installed at the time of sample collection to engage the alarm. However, the following lines of evidence support the conclusion that overflow was occurring:

1. The height of water measured in the pump chamber at the time of 002A sample collection (9:00 AM on 1/17/2019) was 3.836 ft-bgs which is approximately 1.5 inches above the top of the baffle in CB-87R.
2. The measured flow at Outfall 002A (111 gpm) exceeded the average[1] effluent discharge flowrate (83.4 gpm) at the time of sample collection.
    a. Note: This would result in an estimated overflow rate of 27.6 gpm. However, this exceeds the theoretical overflow rate, calculated by a TCE mass balance, of 7.5 gpm. Therefore, the actual overflow rate at the time of sample collection was likely somewhere between 8 and 28 gpm.

The following corrective action(s) are planned:

1. We will increase the recovery flow rate of the overburden system in an effort to reduce the amount of overburden infiltration into the storm sewer which will reduce the dry weather flow and, under normal conditions, allow dry conditions on the downstream side of the baffle to be maintained at the design maximum vault recovery rate. The overburden system was consistently recovering between 20 and 30 gpm during the month of January.
2. We will increase the vault recovery flow rate, to the extent practicable, in an effort to reduce the frequency of overflow and/or the magnitude of overflow, during the month of February.

[1] Flow rates are logged at 10 minute intervals. Average effluent flow rate calculated as the average of the three closest effluent flow rate readings to the time of sample collection.